



Tangential Flow Filtration System

Version 1.0

Tanfil 100

The Tanfil 100 is a compact tangential flow filtration system that enables simultaneous concentration and diafiltration. This reduces membrane fouling and supports scalable bioprocessing for various applications, such as biomolecule purification, buffer exchange and other laboratory uses.



ROCKER

FEATURES + BENEFITS

Multi-purpose

- Tangential flow filtration (TFF) technique enables concentration and diafiltration during the same run.

Reduced membrane fouling

- Feed flows parallel to membrane and thus prevents membrane fouling and increases membrane utility.
- Tangential flow filtration operates with the sample flow moving horizontally across the membrane surface at a tangential angle, preventing the accumulation of macromolecules and reducing concentration polarisation caused by reduced flow rates.
- Stable flow rate and prolongs the lifespan of the filter membrane.

Scalable system

- Use the same parameters and conditions from trial to mass production.

Plug-and-play operation

- Integration with pump, liquid reservoir and pressure gauges. Plug in the tube, add samples and start processing.

Applications:

- Concentration and desalting
- Diafiltration and purification
- Buffer exchange and dialysis
- DNA / RNA / exosomes, extracellular vesicles (EVs) concentration
- Biomolecules separation and purification
- Desalting and buffer exchange

OPERATION



Certifications:

- CE certification
- UKCA certification
- RoHS certification

Supplied with:

- Tanfil 100
- Support rod
- Feed gauge mounting set
- Retentate gauge mounting set
- Capsule bracket set
- Reservoir (including lid kit)
- Magnetic stirrer
- Fittings / parts bag
- Power cord

Tanfil 100

TECHNICAL SPECIFICATIONS

SPECIFICATIONS	DESCRIPTION
MAX. INLET PRESSURE	60psig
MAX. GAUGE PRESSURE	80psig
RECIRCULATION FLOW RATE	0 - 460mL/min
MIN. RECIRCULATION VOLUME	7mL
RESERVOIR	PES, 500mL
NOISE LEVEL	55dB
WEIGHT	7.8kg
DIMENSIONS (LxWxH)	28 x 33 x 16cm
MAX. POWER	50W
SAFETY	Motor overload protection, fuse



Parts Material List

SPECIFICATIONS	DESCRIPTION
RESERVOIR	PES
RESERVOIR LID	PP
RESERVOIR O-RING	Silicone
MAGNETIC STIRRER BAR	PTFE coated
THREE-WAY STOPCOCK	PC, POM
GAUGE WETTED PARTS	SS316
GAUGE MOUNTING BLOCK	PP
LUER FITTINGS	SS316, PP
LUER FITTING O-RING	Silicone
TUBING - ULTRA-C	Platinum-cured silicone
TUBING - PHARMED BPT	TPE

Ordering Information

PRODUCT CODE	DESCRIPTION	PACK SIZE
184100-02	Tanfil 100	Each

Accessories



MINIMATE™ TFF CAPSULE

Compact TFF capsules that enable efficient biomolecule concentration, diafiltration, high recovery and scalability. They offer simple and easy to setup testing.



Features + Benefits

Dual-function processing

- Performs concentration and diafiltration (desalting) on the same system
- Reduces handling steps and minimises product loss

High efficiency & low hold-up volume

- Low internal volume (1.6mL) enables high concentration factors
- Can process up to 1L and concentrate to 5mL

High product recovery

- Uses Omega™ PES ultrafiltration membrane
- Low protein binding reduces non-specific adsorption and improves yield

Plug-and-play design

- Self-contained capsule with tubing and fittings included
- Works with standard lab pumps for easy setup

Scalable system

- Multiple capsules can be connected in parallel
- Same design as larger systems - predictable scale-up to production

Cost-effective & flexible use

- Disposable option eliminates cleaning validation
- Can also be cleaned and reused in non-critical applications

Reliable & quality assured

- 100% integrity tested during manufacturing
- Certificate of Quality available for each unit

Applications:

- Concentrate and desalt proteins, peptides, or nucleic acids (DNA, RNA, oligonucleotides)
- Recover antibodies or recombinant proteins from clarified cell culture media
- Process metal sensitive enzymes and molecules
- Separate (fractionate) large from small biomolecules
- Concentrate viruses or gene therapy vectors
- Prepare samples prior to column chromatography
- Concentrate samples after gel filtration
- Depyrogenate water, buffers, and media solutions



MINIMATE™ TFF CAPSULE

Technical Specifications

SPECIFICATIONS	DESCRIPTION
EFFECTIVE FILTRATION AREA	50cm ²
RECOMMENDED CROSSFLOW	30 – 40mL/min
OPERATING TEMPERATURE RANGE	5°C to 50°C
CAPSULE MAXIMUM OPERATING PRESSURE	4 bar (400 kPa, 60 psi)
pH RANGE	1 - 14
PRODUCT HOLD UP VOLUME (FEED/RETENTATE)	Approx. 1.6mL
FORWARD FLOW AIR INTEGRITY VALUE	≤ 7/mL/min @ 0.75 bar (10 psi)
DIMENSIONS (LxWxH)	20cm x 3.8cm x 1.8cm



Parts Material List

SPECIFICATIONS	DESCRIPTION
FILTER MEDIA	Omega membrane (m-polyethersulfone)
HOUSING	Polypropylene, glass reinforced
SCREENS, HOUSING, HOUSING SEALING RING, FITTINGS	Polypropylene
MEMBRANE PLATE/FILTRATE CHANNELS	Polyethylene
INTERNAL GASKET	Ethylene propylene elastomer

Ordering Information

PRODUCT CODE	MOLECULAR WEIGHT CUT-OFF	PACK SIZE
PALOA001C12	1K	Each
PALOA003C12	3K	Each
PALOA005C12	5K	Each
PALOA010C12	10K	Each
PALOA030C12	30K	Each
PALOA050C12	50K	Each
PALOA070C12	70K	Each
PALOA100C12	100K	Each
PALOA300C12	300K	Each
PALOA500C12	500K	Each
PALOA990C12	1,000K	Each

TFF NANOSEP CENTRIFUGE FILTER

Compact centrifugal filter enables rapid small-volume concentration, desalting, high recovery and low protein binding.

- Typical recoveries are > 90% - available with low protein-binding Omega, Bio-Inert, and PTFE membranes
- A wide range of molecular weight cut-offs, colour-coded for easy identification
- Constructed of low-binding polypropylene
- Ultrasonically welded seals prevent bypass or seal failure
- Fits standard centrifuge rotors that accept 1.5mL tubes



Technical Specifications

SPECIFICATIONS	DESCRIPTION
FILTER MEDIA	Omega (modified polyethersulfone) ultrafiltration membrane
SAMPLE RESERVOIR, MEMBRANE SUPPORT BASE, AND FILTRATE RECEIVER	Polypropylene
EFFECTIVE FILTRATION AREA	0.28cm ²
OVERALL LENGTH (FULLY ASSEMBLED WITH CAP)	4.5cm
CAPACITIES	Maximum Sample Volume: 500µL Final Concentrate Volume: 15µL Filtrate Receiver Volume: 500µL Hold-up Volume (membrane/support): <5µL
OPERATING TEMPERATURE RANGE	0 - 40°C
PH RANGE	1 - 14
MAXIMUM CENTRIFUGAL FORCE	14,000 x G
CENTRIFUGE	Fits rotors that accept 1.5mL tubes

Ordering Information

PRODUCT CODE	MOLECULAR WEIGHT CUT-OFF	COLOUR	PACK SIZE
PALOD003C35-1	3K	Grey	PK24
PALOD010C35-1	10K	Blue	PK24
PALOD030C35-1	30K	Red	PK24
PALOD100C35-1	100K	Clear	PK24
PALOD300C35-1	300K	Orange	PK24

TFF CARTRIDGE HANDSABIOMED - PSU

TFF cartridge suitable for the concentration, purification, desalting, buffer displacement of EVs, MVs and exosomes.

Features + Benefits

Tangential Flow Filtration (TFF)

Uses TFF technology for the separation, purification and concentration of biomolecules, such as exosomes.

Washable and reusable

Cartridges can be washed after use and reused up to 20 times.

Individual aseptic packaging

Each cartridge is sterile and can be radiation sterilised after use.

Manual and instrument operation

Samples can be processed with the Tanfil 100 or manually.

Technical Specifications

SPECIFICATIONS	TFF-EASY	TFF-MV
FILTER ELEMENT	Hollow fibre membrane	
MATERIAL	Polysulfone (PSU)	Polyethersulfone (PES)
APERTURE	5nm	150nm
MOLECULAR WEIGHT CUT OFF	15kDa	1,000kDa
FILTER AREA	0.028m ²	0.013m ²
STERILITY	Yes	
REUSABLE	Up to 20 times	
RECOMMENDED SAMPLE VOLUME	5mL to 15mL	5mL - litres
OPERATING TEMPERATURE	Max. 60°C	
CONCENTRATE TIME	5 minutes	
MANUAL OPERATION	Yes	
INSTRUMENT OPERATION	Yes	
EV RECOVERY RATE	83%	
FILTER VOLUME	2mL	



HBM-TFF1



HBM-TFFMV



Applications:

- Concentration and purification of extracellular vesicles (EVs), microvesicles (MVs) and exosomes
- Dilute sample fluids to concentrate, such as cell culture fluid, urine
- Removal of small molecules, ions and interferences such as THP
- Dialysis such as buffer displacement and salt removal
- For use with SEC columns

Ordering Information

PRODUCT CODE	DESCRIPTION	APERTURE	PACK SIZE
HBM-TFF1	Cartridge HansaBioMed TFF-Easy	5nm	Each
HBM-TFFMV	Cartridge HansaBioMed TFF-MV	150nm	Each

TFF CARTRIDGE HANDSABIOMED - PES

TFF cartridge suitable for the concentration, purification, desalting, buffer displacement of EVs, MVs and exosomes.



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Technical Specifications

SPECIFICATIONS	DESCRIPTION
FILTER ELEMENT	Hollow fibre membrane
MATERIAL	Polyestersulfone (PES)
APERTURE	50 ±10nm
MOLECULAR WEIGHT CUT OFF	800kDa
FILTER AREA	0.025m ²
STERILITY	Yes
REUSABLE	Up to 20 times
RECOMMENDED SAMPLE VOLUME	10mL - 1L
OPERATING TEMPERATURE	Max. 60°C
CONCENTRATE TIME	5 minutes
MANUAL OPERATION	Yes
INSTRUMENT OPERATION	Yes
EV RECOVERY RATE	81%

Applications:

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Ordering Information

PRODUCT CODE	DESCRIPTION	FILTER VOLUME	PACK SIZE
HBM-TFFEVS-S	Cartridge HansaBioMed TFF-EVs-Small	2mL	Each
HBM-TFFEVS-L	Cartridge HansaBioMed TFF-EVs-Large	30mL	Each

Accessories

PES Reservoir Filter Set

- 500mL volume

SPECIFICATIONS	DESCRIPTION
RESERVOIR	PES
RESERVOIR LID	PP
RESERVOIR O-RING	Silicone



PRODUCT CODE	DESCRIPTION	PACK SIZE
184100-40	PES Reservoir Filter Set	Each

Repair Kit for Tanfil 100

PRODUCT CODE	DESCRIPTION	PACK SIZE
184100-62	Repair Kit for Tanfil 100	Each

PharMed® BPT TPE

- Thermoplastic elastomer (TPE)
- High purity
- Excellent durability
- Good flexibility
- Opaque finish

Applications: Biocompatibility & sensitive bioprocessing



PRODUCT CODE	DESCRIPTION	TUBING	ID	OD	WALL THICKNESS	LENGTH	AUTOCLAVABLE	PACK SIZE
184100-48	PharMed® BPT	#16	3.2mm	6.4mm	1.6mm	7.5m	Yes	Each

Tygon® Silicone Sani-Tech® Ultra-C Platinum-Cured

- Ultra-high purity with very low extractables
- Platinum-cured for superior biocompatibility
- Excellent flexibility
- Transparent

Applications: Biocompatibility & sensitive bioprocessing



PRODUCT CODE	DESCRIPTION	TUBING	ID	OD	WALL THICKNESS	LENGTH	AUTOCLAVABLE	PACK SIZE
184100-47	Tygon® Silicone Ultra-C Platinum-Cured	#16	3.2mm	6.4mm	1.6mm	15m	Yes	Each



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